

CLAIMS

1. An apparatus, including  
a client device, including a means for making a request to a remote  
server;  
a proxy encoder, including software for identifying and manipulating  
template information and sub-template information;  
a memory coupled to said proxy encoder, said memory including  
said template information and said sub-template information, and  
a communication network coupled to said client device and said  
proxy encoder.
2. An apparatus as in claim 1, including a decoder, wherein said  
decoder includes a means for intercepting said requests.
3. An apparatus as in claim 2, wherein said decoder includes a  
means for decompressing responses to said requests and integrating said responses  
to said requests.
4. An apparatus as in claim 2, wherein said decoder is coupled  
to said client device.

1           5.     An apparatus as in claim 2, wherein said decoder is coupled  
2 to a network element local to said client device, where said network element  
3 includes one of the following: web browser, a firewall, a router or a proxy cache.  
4

5           6.     An apparatus as in claim 1, wherein said proxy encoder  
6 includes software for data compression.  
7

8           7.     An apparatus as in claim 1, wherein said proxy encoder  
9 includes software for comparing said templates and sub-templates in said memory  
10 with other information obtained from said remote server.  
11

12           8.     An apparatus as in claim 1, including  
13 a means for distinguishing between those documents that are sent  
14 more efficiently using templates and sub-templates from those documents that are  
15 sent more efficiently without the use of sub- templates;  
16

17           a means for managing a hierarchy of sub-templates; and  
18

19           a means for assembling templates and sub-templates.  
20

21           9.     A method, including  
22 redirecting a request for information from a client to a proxy server,  
said proxy server including a memory comprised of template information and sub-  
template information;

1 comparing information included in said memory with other  
2 information from a remote server;

3 responding to said request by sending template information, sub-  
4 template information and delta information.

5  
6 10. A method as in claim 9, wherein said step of redirecting is  
7 performed by a decoder coupled to a user's browser.

8  
9 11. A method as in claim 9, wherein said step of redirecting is  
10 performed by a remote server.

11  
12 12. A method as in claim 9, wherein said step of comparing is  
13 performed by a proxy encoder.

14  
15 13. A method as in claim 9, wherein said step of comparing  
16 information includes tagging said template information so as to identify a version  
17 of said template information.

18  
19 14. A method in claim 9, wherein said step of comparing includes  
20 tagging said sub-template information so as to identify a version of said sub-  
21 template information.

1           15.    A method as in claim 9, wherein said step of comparing  
2 includes identifying a set of delta information  
3

4           16.    A method as in claim 9, also including a step of compressing  
5 and caching said template information.  
6

7           17.    A method as in claim 9, also including a step of compressing  
8 and caching said sub-template information.  
9

10          18.    A method as in claim 9, wherein said step of responding to  
11 said request is performed by said proxy encoder.  
12

13          19.    A method as in claim 9, including a step of integrating said  
14 template information, said sub-template information and said delta information.  
15

16          20.    A method as in claim 19, wherein said step of integrating  
17 includes decompressing said template information and said sub-template  
18 information.  
19

20          21.    A method as in claim 19, wherein said step of integrating is  
21 performed by said proxy encoder.  
22

1           22.    A method as in claim 19, wherein said step of integrating is  
2 performed by said decoder.

3  
4           23.    A method as in claim 9, including steps of  
5 distinguishing between those documents that are sent more  
6 efficiently using templates and sub-templates from those documents that are sent  
7 more efficiently without the use of templates;  
8 managing and retrieving sub-templates; and  
9 assembling templates and sub-templates.

10  
11           24.    A method as in claim 23, wherein said step of distinguishing  
12 includes  
13 identifying common sub-strings,  
14 classifying said common sub-strings,  
15 checking the number of variations of said sub-strings; and  
16 comparing said number to a number of said deltas.